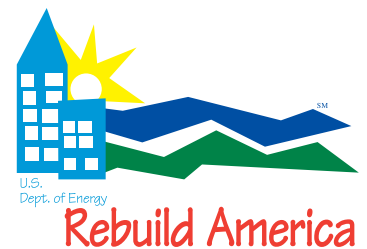


Rebuild Hawaii Consortium

ACTION PLAN



REBUILD HAWAII CONSORTIUM ACTION PLAN

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**WORKING DRAFT
DECEMBER 31, 2002**

**REBUILD HAWAII CONSORTIUM
ACTION PLAN**

This Action Plan is intended to be a dynamic, ever-evolving document that will incorporate new ideas and new projects as the Rebuild Hawaii Consortium continues to grow and evolve. In the best sense of the phrase, we intend for this to be a "living document" and encourage each and every Consortium member to contribute to its long and useful life.

I. SITUATION ANALYSIS

Hawaii has many unique energy challenges. In spite of a wealth of renewable energy resources and a two-decades-old supportive state policy for energy efficiency, the state continues to rely on imported petroleum and coal for almost 90% of its energy needs. Because its citizens must use energy resources imported from foreign lands, Hawaii incurred the highest energy prices among all states in 1999, according to the *Petroleum Institute*, and approximately 70% of Hawaii's energy dollars leave the state.

To address the energy needs of Hawaii's communities, Maurice Kaya, Program Administrator, Energy, Resources, and Technology Division, Department of Business, Economic Development, and Tourism (ERTD/DBEDT), turned to the U.S. Department of Energy (U.S. DOE) program Rebuild America. The program was founded in 1995 as part of the Climate Change Action Plan. Rebuild America consists of a national network of community partnerships – made up of municipalities, state agencies, schools and universities, nonprofit organizations and businesses – that help building owners save energy and money by providing expertise on energy-efficiency retrofits and practices, renewable energy, high-performance building technologies, innovative financing, energy education, and green design. Through its National Labs, DOE's Rebuild America program also provides technical assistance on issues such as innovative technologies, measurement and verification, technical reviews of solicitations for projects, financing documentation, contract performance, and energy analysis.

Rebuild America's community partnerships--usually led by a representative of the state or local government--tailor their actions to meet local needs by engaging local stakeholders such as financial institutions, non-profit organizations, small businesses, utilities, and energy service companies. Liz Raman, ERTD/DBEDT, and Eileen Yoshinaka, U.S. DOE Pacific Liaison, serve as program representatives for Hawaii. Ultimately, communities benefit from revitalized neighborhoods, more sustainable

buildings, improved school facilities, better low-income housing, and the positive economic impact brought by keeping local dollars at home.

The Rebuild Hawaii Consortium (referred to as the "Consortium" in this document) was formed in 1998 to leverage resources of all the Rebuild America partnerships in Hawaii, and bring in government, utilities, community, and private sector entities to make it a comprehensive statewide organization. The Consortium promotes energy efficiency as a catalyst for economic development, especially in the underserved small business and low-income housing sectors, by assisting its members to develop projects for delivery of energy savings, products, practices and to locate financing for the projects.

With four Counties, five utilities, eleven state agencies, nine federal agency representatives, the University of Hawaii and its community college system, and eight private sector representatives, the Consortium is a model of consensus building in the best sense--members agree on proposals and then move forward together on energy efficiency projects. A visual representation of the Consortium is shown in Appendix I.

A comprehensive list of participating Rebuild Hawaii Consortium partnerships includes the following, with "Affiliate" defined as private sector businesses and organizations that contribute to the energy and resource conservation goals of the Consortium:

COUNTIES

- City & County of Honolulu*
- County of Hawaii*
- County of Kauai*
- County of Maui*

STATE OF HAWAII

- Department of Accounting and General Services
- Department of Business, Economic Development & Tourism (DBEDT), State of Hawaii*
- Department of Education, State of Hawaii*
- Hawaii Army National Guard, State of Hawaii
- Housing and Community Development Corporation of Hawaii, State of Hawaii*
- Judiciary, State of Hawaii
- Hawaii Public Library System*
- Maui Community College*
- University of Hawaii Community Colleges*
- University of Hawaii at Hilo
- University of Hawaii-Manoa School of Architecture*

FEDERAL

- Hickam Air Force Base
- Marine Corps Base Hawaii
- Navy Public Works Center Pearl Harbor
- Navy Region Hawaii Pearl Harbor

- Pacific Division Naval Facilities
 - Engineering Command
- Pearl Harbor Naval Shipyard
 - Intermediate Maintenance Facility
- U.S. Army
- U.S. Coast Guard
- U.S. Department of Energy, Pacific Liaison
- U.S. Department of Housing and Urban Development

UTILITIES

- The Gas Company/Citizens Energy Service*
- Hawaiian Electric Company, Inc. (HECO)*
- Hawaii Electric Light Co., Inc.
- Maui Electric Company, Inc.
- Kauai Island Utility Cooperative*

PRIVATE SECTOR

- Chaney, Brooks and Co. Inc. (Affiliate)
- Eco-Lite (Affiliate)
- Energy Conservation Hawaii (Affiliate)
- Hawaii Society of Healthcare Engineering (Affiliate)
- Global Energy Partners, LLC
- Illuminating Engineering Society of North America, Hawaii Chapter (Affiliate)
- Scheibert Energy Company
- SSFM Engineers, Inc. (Affiliate)

*Rebuild America Partner

By minimizing the amount spent on its high energy bills through energy efficiency and diversifying its energy supply sources through renewable energy, the government of Hawaii is able to use its revenues more effectively. In the same vein, private businesses become more profitable and competitive in Hawaii and the international marketplace. In addition, energy efficiency projects directly impact the local economy by providing quality jobs; while, both renewable energy and energy efficiency help cut down on air pollution.

Increasing the energy-efficiency of Hawaii's buildings will staunch the outflow of energy dollars for imported fuels. Retrofitting or replacing inefficient energy technologies--such as lighting, HVAC, chillers, and pump motors--keeps dollars in the local economy and reduces damaging environmental impacts associated with power generation from fossil fuels.

Commercial loans, leases, performance contracting, and government agency budgets finance energy efficiency projects. Performance contracting is a primary vehicle for implementing many of Hawaii's proposed energy efficiency measures, with project financing provided directly by energy services companies (ESCOs) or third parties.

Utility demand-side management (DSM) incentive payments, or rebates are used either as credits against electricity costs or to lower initial capital costs of energy conservation measures.

When considering long-term environmental impact, renewable energy can be considered a source of efficient energy as well. In 1997, 93.1 percent of Hawaii's electricity was generated by fossil fuel—oil and coal. About 3.6 percent came from biomass and municipal waste; and 3.3 percent, from other sources, including wind, geothermal and hydro. Communities in Hawaii can increase their resource sustainability if they increase their use of energy from indigenous resources such as biomass (sugar, MSW, and landfill methane plants), hydroelectric, geothermal, wind, solar water heaters, and on-grid and stand-alone photovoltaics (PV). Income tax credits are stimulating the utilities solar water heating programs and private sector PV projects; these tax credits expire July 1, 2003.

Hawaii, largely through the impact of the tax credit, has led the nation in installed solar energy systems under the U.S. DOE Million Solar Roofs program. As of January 2003, Hawaii has more than 12,000 solar energy systems installed.

II. GOALS AND OBJECTIVES

Rebuild Hawaii Consortium's goals are to promote efficient resource utilization by: identifying and leveraging statewide (and national) resources, creating community awareness, building partnerships, and employing innovative solutions to resolve resource efficiency issues.

To achieve these goals the Rebuild Hawaii Consortium will:

- Encourage initiatives that lower energy costs through cost-effective investments in energy-efficient technologies by working with government, ESCO's, community political leaders, and private industry.
- Employ innovative solutions to resolve resource efficiency issues, using expertise from Rebuild America, the National Labs, and many other U.S. Department of Energy (U.S. DOE) programs brought to the community partnerships through the Rebuild America program.
- Identify and leverage statewide resources such as government, private sector, utility rebates, and national resources such as State Energy Program awards to achieve greater results at the local level of partnerships.
- Build community partnerships by establishing rapport with communities and teaching them the many benefits of resource conservation, energy efficiency, and economic development.
- Strengthen businesses--especially those affiliated with the hospitality industry--by making them more efficient, competitive, and forward-looking with energy conservation and resource management.
- Serve underserved markets in low-income single and multifamily housing and small business.

- Greatly increase promotional efforts to publicize these actions, to demonstrate the benefits of energy efficiency, by using various message distribution vehicles appropriate to the audience, message, and external environment.

The Consortium's resource efficiency activities will benefit several sectors, including: state, county, and local government; low-income single and multifamily housing; K-12 schools; higher education; and commercial building/small business.

III. ONGOING PROJECTS

Government, utilities, business, professional organizations, community organizations, electric and gas utilities, energy services companies support the Consortium's projects. With these organizations, the Consortium has undertaken the following projects:

REBUILD HAWAII STATE

- **University of Hawaii at Hilo and Hawaii Community College Performance Contract.** Construction on the first energy savings performance contract for State of Hawaii facilities, 50+ buildings on the University of Hawaii and Hawaii Community College campus at Hilo, was completed in December 1996 and, as of June 2001, produced over \$2.7 million in energy cost savings. The \$2.9 million investment in energy efficiency retrofits is projected to produce over \$6.6 million in energy and other cost savings during the term of the contract. In addition, over \$200,000 in maintenance savings are being achieved annually.

- **Hawaii Healthcare Systems Corporation Performance Contracts.**

Construction is underway on two hospitals under energy performance contracts: (1) Kona Community Hospital; (2) Hilo Medical Center. A third hospital, Kauai Veterans Memorial Hospital, is in the design phase.

- **New State Performance Contracting Projects** include the Hawaii Army National Guard, the Hawaii State Public Library System, and the Judiciary.

- **Na Makani Energy Initiative** on the Big Island of Hawaii installed 85 solar water heaters on residences; total project investment \$413,899; annual energy savings are \$34,680.

- **Energy and other informative data** on Hawaii Rebuild America Partnership activities is gathered to provide the State and partnerships with individual and aggregate information on partnership activities, accomplishments, and metrics on energy efficiency. Results are posted on the Rebuild America and the DBEDT websites.

- **Workshops and technical seminars** have included building commissioning, LEED rating system training, Life Cycle Cost basics, Measurement and Verification.

- **REBUILD HAWAII CONSORTIUM.** The State has developed this unique organization to meet the needs of the energy communities in Hawaii.

- **Mentor** for the State of Alaska's Rebuild America partnership
- Establish **Rebuild Coordinators** to assist Partnerships to implement projects and report accomplishments

-

REBUILD HAWAII SCHOOLS

- Department of Education has completed phase 4 of its **lighting retrofit in K-12 schools**, covering 13.8 million square feet. Investment to date amounts to over \$11 million and projected annual energy cost savings are more than \$2 million.
- **Establish design guidelines for High Performance Schools** to improve learning and building environments. This project will include development of a design document for Hawaii High Performance Schools that can be integrated into the Department of Education's Educational Specifications and Standards for K12 schools and related technical assistance.

HOUSING AND COMMUNITY DEVELOPMENT CORPORATION OF HAWAII

- Hope VI Project, **an urban low-income housing project** by the Housing and Community Development Corp. of Hawaii, is focused on obtaining financing, grants and other funding to implement \$35 million in improvements at Kuhio Park Terrace
- **Four low-income housing projects (Kalihi Valley Homes II, Waimana-Sunflower II, Maili I and Maili II)** undertaken by HCDCH have produced \$53,529 in annual cost savings from an investment of \$193,000.

UNIVERSITY OF HAWAII AT MANOA SCHOOL OF ARCHITECTURE

- The **Green Office Project** provided enhancements to an existing exhibit and carries out a public awareness program for architects, interior designers, engineers, state and county facilities planners, large company office managers and construction professionals. The exhibit has been shown at five expositions. In addition, two seminars have been given on related topics. The exhibit will be on permanent display at the office of the American Institute of Architects in Honolulu
- Under the **K-12 portable classroom cooling project**, classroom features including temperature, humidity, air movement, and lighting are being measured and studied by the School of Architecture, University of Hawaii at Manoa, to develop cooling guidelines for renovation of portable classrooms by the Department of Education to have a classroom environment conducive to learning.
- Support to Rebuild America partnerships out of state has included **design assistance for fire/police facilities in Rainier, Washington**

UNIVERSITY OF HAWAII COMMUNITY COLLEGE SYSTEM

- The Community College system completed a **\$5.4 million lighting retrofit** in the four colleges on Oahu with annual cost savings aggregating \$924,000.

MAUI COMMUNITY COLLEGE

- Maui Community College is performing feasibility studies on the **efficiency of its EMS system**.
- Maui Community College has completed a study of the feasibility of **consolidating other existing air-conditioning loads** into the central plant and incorporating a thermal storage system into the system. Results show that the consolidated system could reduce electricity cost at the campus by \$86,522 annually. Projected investment is \$684,200. An additional operating savings of \$180,000 per

year could be obtained from the installation of a **partial chilled water based thermal storage system** at a cost of \$1,482,800.

REBUILD HAWAII COUNTY

- **Hawaii County Performance Contracts.** Construction on the first county performance contract, the Hawaii County Building, was completed in March 1997. Total investment was \$480,000; cumulative cost savings to December 31, 2001, were \$300,000. Hawaii County has also retrofitted 27 fire and police stations for a total investment of \$397,000, cumulative savings \$260,430. A \$1.3 million contract for the Hilo and Kona Public Safety Buildings has produced \$139,000 in savings. Cumulative investment for the three projects is \$2.2 million.

- **Hawaii County's Energy Smart Schools Project** is underway at the West Oahu Explorations Academy.

- **Department of Water Supply** will develop a pump efficiency testing and energy savings tracking program to reduce water system pumping costs. Preliminary estimates show a 3-4% reduction in savings on County utility budgets from this project.

REBUILD KAUAI

- **Kauai County Performance Contracts.** Kauai County has retrofitted 29 county facilities/buildings with energy savings equipment. Total investment was \$525,000 with cumulative savings to June 30, 2001, \$232,776. A total of \$680,000 in energy and operational cost savings is projected over the 10-year project period (1998-2008).

- Kauai County has conducted an **energy audit of Kauai Lagoon Golf Courses'** (351 irrigated acres) pumping systems and identified specific improvements to reduce energy use. The study focused not only on technology-specific improvements such as controls, variable speed drives and premium efficiency motors, but also reviewed energy supply and operational adjustments that could reduce energy costs. The study found that annual energy savings could be 318,294 kWh; annual energy cost savings \$102,421. Total project costs including a utility incentive would be \$226,737 resulting in a 2.2 year simple payback. The golf course has been sold and the project is not expected to be implemented. A workshop on results will be held in Kauai in March 2003.

- A **2001 Kauai Water Department Lighting Retrofit** cost \$6,000 and had a 1.6 year payback.

REBUILD CITY & COUNTY OF HONOLULU

- **City and County of Honolulu Performance Contracts.** The City & County of Honolulu is retrofitting the City Hall Office Building, a \$3 million investment with anticipated \$118,000 annual savings. A cogeneration unit is one of the efficiency measures installed. The City & County has also replaced traffic lights at 400 intersections with red and green LED lights, a \$1.7 million investment with \$313,000 annual cost savings.

The City & County of Honolulu is developing a **performance contracting/energy efficiency team** and will hold a **workshop** on performance contracting.

HECO ENERGY\$OLUTIONS

- **Small commercial sector market transformation project** of HECO in 1998 successfully determined new marketing approaches and broke down barriers to installation of energy efficiency devices in small business. This project is being continued as HECO-Energy Solutions for Small Business and has saved small businesses \$448,997 from inception to December 2001.
- **EnergySmart Schools, Oahu**, Student Energy Audit pilot project in four Oahu high schools (Waianae, Kalaheo, Radford and McKinley) beginning in 2000 and spearheaded by HECO. Students audit school facilities and small businesses and learn auditing, marketing, presentation, and computer software skills. To December 2002, the project has saved schools \$362.
- **Maui Schools Lighting Audit** was managed by HECO with its partners Pacific Energy Services, Maui Community College, and Academic Capital Group. The audit projects a 34% reduction in lighting energy consumption that would save the 32 public schools in Maui approximately \$369,000 per year; utility rebate is estimated to be \$233,400; total project cost would be about \$2 million. The project also included a benchmarking component in which the schools were ranked by square footage, population, energy savings, payback, costs and rebates, lighting load among others. The State Department of Education did not follow recommendations for financing retrofits but used the data to justify appropriations for school repair projects statewide.
- **Sustainability Workshops**. Four sustainability workshops organized by HECO with partners including DBEDT and the University of Hawaii School of Architecture targeting at architects and engineers will be held in 2003-2004. The workshop topics include controls, daylighting, modeling, and IAQ. Continuing education credit will be given to participants.

THE GAS COMPANY

- GASCO conducted a **workshop on distributed energy** on Oahu in January 2001 and a series of three **workshops on Combined Heat and Power Systems (CHP)** on Maui, Kauai, and Hawaii in December 2002. More than 40 participants attended each session. Speakers focused on practical aspects of installing CHP.

IV. JANURY 2002 STRATEGIES

The Consortium held a meeting in January 2002 to review goals, objectives, needs, and strategies. Based on findings, project concepts were presented to the Consortium for consideration for support. A matrix of these projects and their current status is in the Appendix.

Consortium members were asked why they were involved in the Consortium. Reasons included:

- Education
- Meet Institutional Goals
- Program Development
- Reduce Costs

- Business Development and Networking
- Information Sharing
- Conservation
- Professional Growth
- Environment Resources
- Problem Solving
- Improve Quality of Life
- Synergy
- Help Economy
- Job creation

The group outlined different sectors and areas where Consortium members believed that efforts should be targeted. These included low income housing, small business, commercial buildings, government, institutional retrofits, residential, K-12 schools, aggregated savings, and sustainability/technology. Core needs, available resources, and sources of support were considered. A matrix of these follows.

LOW INCOME HOUSING		
Core Needs	Available Resources	From Whom
1. Technical resources and assistance (solar water heating & home comfort)	<ul style="list-style-type: none"> • Technical resources & assistance • Design assistance 	Rebuild (especially national labs), HECO, UH, Cully Judd (Inter-Island Solar Supply), DBEDT
2. Funding	<ul style="list-style-type: none"> • Funding Handout • Rebates • Performance Contracting • C&C • CDBG • HUD 	HECO DBEDT Rebuild America/ DOE
3. Maintenance training and support	<ul style="list-style-type: none"> • Through leases/ performance contracting • Training through Rebuild America • HUD? 	Rebuild America Vendors
4. Leasing/alternative financing	<ul style="list-style-type: none"> • Bulk purchase programs through labs/other • Performance Contracting Guidelines 	DBEDT Rebuild
5. Design guidelines <ul style="list-style-type: none"> a. Single family b. Multi-family low rise and high rise 	<ul style="list-style-type: none"> • Procurement guidelines for energy-efficient equipment • Global Green (for affordable housing) • Alameda County Waste Management Authority • UH Architecture School 	ACEEE Rebuild http://www.globalgreen.org Alameda: http://www.stopwaste.org UH Architecture School
6. Train procurement officials	<ul style="list-style-type: none"> • Case Studies 	Consortium for Energy Efficiency

SMALL BUSINESS (specifically HECO Small Business Solutions Program where 106 small business have received assistance with lighting retrofits since pilot program with Rebuild America)

Core Needs	Available Resources	From Whom
1. Publicize Success! 2. “How to” –leverage 3. Investigate business case to expand 4. Perpetuate and self-sustain 5. Neighbor islands?		

COMMERCIAL BUILDINGS

Core Needs	Available Resources	From Whom
1. Funding of projects (incentives to overcome hurdle of upfront costs)	<ul style="list-style-type: none"> • Rebates • Tax Incentive • Rebuild America 	<ul style="list-style-type: none"> • HECO • State • DOE
2. Education (small business owner -financial -technical)	<ul style="list-style-type: none"> • Rebuild Partners 	<ul style="list-style-type: none"> • Rebuild Labs/Partners
3. ROI	<ul style="list-style-type: none"> • 	<ul style="list-style-type: none"> •
4. Utility support for co-generation	<ul style="list-style-type: none"> • 	<ul style="list-style-type: none"> • State • HECO

GOVERNMENT

Core Needs	Available Resources	From Whom
1. Funding	<ul style="list-style-type: none"> • Department Budget • Federal/Private Grants • ESPC/UESC • Rebates • Utility Funding 	<ul style="list-style-type: none"> •
2. Technical Information/Education	<ul style="list-style-type: none"> • Energy Training • Government Sources • Utilities • Internet • Seminars/Conferences • Private Contractors/Vendors • Site Visits/Case Studies • Periodicals 	Rebuild America Energy Star DBEDT/US DOE etc. HECO

INSTITUTIONAL RETROFITS--STANDARDS		
Education Public Housing		
Core Needs	Available Resources	From Whom
1. Champions 2. Political & or Leadership Support 3. Clear Policy 4. Institutional Buy-in 5. Research	<ul style="list-style-type: none"> • ESCOs--Expertise, finances—whole building approach combine with short term and long term • Federal Money • Rebuild Expertise—help with contracting • Dedicated staff 	

RESIDENTIAL		
Core Needs	Available Resources	From Whom
1. Money—rebates and tax incentives to drive participation 2. Education	<ul style="list-style-type: none"> • Hawaiian Home Lands • Universities • Utilities • HUD • Housing Authorities (county and state) • Weatherization Program • Solar Industry • Real Estate Management 	

K-12 SCHOOLS—FACILITIES AND ENERGY EDUCATION		
Core Needs	Available Resources	From Whom
1. Structured curriculum 2. Obtain resources 3. Upgrade existing facilities	<ul style="list-style-type: none"> • Grants • DOE • Utilities • PTA • Local resources w/in schools • UH and community colleges • “Phantom & Vampire Loads” 	

AGGREGATED SAVINGS – of small consumer products i.e. soda machines, exit signs, computer monitors		
Core Needs	Available Resources	From Whom
1. Mandate identification of potential energy saving technologies 2. Modeling 3. Recognition of benefits of participation	National Labs EPA Energy Star WWW sites FEMP Auditors Smart Schools Program Lawrence Berkeley Labs	

A new category of SUSTAINABILITY/TECHNOLOGIES has been added to this list.

Based on these results the following short term goals were developed:

1. The Rebuild Hawaii Consortium will have created a model of private/ public partnerships by creating 5,000 new jobs, successfully implementing \$200 million in projects, and creating a new Rebuild Honolulu office.
2. All new construction will include solar water heating, ventilation, and insulation. Federal incentives and income tax credits will encourage implementation of these measures in new projects.
3. There will be a well-established sustainable design community, where building owners will consistently look at life cycle rather than first costs. One hundred percent of all new buildings will be LEED certified and will attain the Energy Star Building label.
4. Energy efficient design in buildings will be supported and implemented through utility, government and quasi-government policies and incentives, including rebates, tax credits and rate structures.

This Action Plan is based on the Consortium Goals and Objectives and results of the Planning Meeting in January 2002. Major efforts of the plan include:

- ***Raise community awareness*** of the Consortium, Rebuild America, and the positive aspects of energy efficiency, resource conservation, and renewable energy, in community partnerships;
- ***Build resources*** for the Consortium by identifying and leveraging statewide and national resources; building partnerships that will add strength to the Consortium; and forming alliances with like-minded groups outside the Consortium; and
- ***Employ innovative solutions to implement energy efficiency*** in buildings throughout the state, especially in the underserved small business and low-income housing sectors, and ***to resolve resource efficiency issues***

V. RAISE AWARENESS

The Consortium needs to effectively raise public awareness about the benefits of, and mechanisms for, implementing energy efficiency measures through project development and media. By raising awareness about energy efficiency and delivery platforms such as Rebuild America and the Rebuild Hawaii Consortium, new avenues will open up which will help the Consortium reach its goals. Raising community awareness of successful projects to a larger audience rewards and motivates Consortium members involved in the projects and propagates further actions. Recognition of successful projects may also help obtain funding and support of projects.

Communications can help raise awareness of energy efficiency and the concepts of Rebuild America to a broad-based audience through the national Rebuild America website, the Rebuild America National Forum, and nationally-published articles. Greater awareness of the Consortium and its projects can be conveyed to the Hawaii community with all the same tools listed above, complemented by Success Stories, Case Studies, the Media Kit/Briefing Book, the Consortium website/brochure/newsletter/Fact Sheet/Power Point presentation. Publications can be distributed at meetings, conferences and forums, press events, presentations, and other gatherings of energy-conscious groups.

During the past year, the Consortium focused on building its website and developing information explaining the Consortium and its projects to increase public awareness of the benefits of community partnerships as follows:

1) **Success Stories** (*Close-ups*) are 2-page, U.S. DOE-formatted and printed success stories of Hawaii Rebuild America Partnership projects. These breezy, attention-grabbing stories include a brief history, unique aspects, goals, achievements, energy savings and investments, and pictures of energy efficiency projects. These success stories help the Consortium foster communications with local chambers of commerce, economic development boards and professional, community and environmental organizations. They include:

- *Rebuild Hawaii State: Leveraging Resources for Success*, on performance contracting, developing the consortium, and its partners (UH-Hilo, National Guard, Judiciary)
- *Rebuild Kauai: Adjusting the Course Mid-Stream*, describes the County's performance contracting program
- *School of Architecture Has Designs on Energy Savings*, University of Hawaii at Manoa energy efficiency projects and green projects, including the green hotel and green office projects.
- *Rebuild Hawaii Island: High-Tech in Paradise*, outlines the County's performance contracting projects and the Na Makani solar water heating program

- *Rebuilding Hawaii's Schools*, describes the Department of Education's efforts to retrofit K-12 schools including a performance contracting effort and audits.
- *Saving Energy By the Book* on the State Public Libraries' partnership and retrofits -

2) The Rebuild Hawaii Consortium ***Fact Sheet*** explains:

- The Consortium's vision of the “big picture” of energy efficiency, renewable energy, Rebuild America's role as a delivery platform for all energy-related programs and projects on the community level, and emerging technologies
- Interesting factoids about Consortium projects, energy efficiency, and renewable energy on state and national levels. The *Fact Sheet* can be distributed at presentations, conferences, and workshops.

3) ***Case-in-Points*** are 4 to 8 page studies of issues and completed projects that go into more detail than a **Success Story** could. Published articles include:

- *Hawaii Has Discovered Energy Solutions for Small Business*
- *HECO Connects with the Community*
- *20 Take-home Lessons from Performance Contracting*
- *Mali II: Emphasizing the Public in Housing*
- *High Performance Contracting: Hawaii County Building Retrofit*
- Na Makani Solar Water Heating Project—in preparation

4) ***Other Publications*** include:

- Larry J. Hill. *Report on Energy-Efficiency Policies to Promote Sustainable Economic Growth in Hawaii*. March 2001.
- *Case Study of Energy Performance Contracting at the University of Hawaii at Hilo and Hawaii Community College*. July 2000.
- *Guide to Energy Performance Contracting: Measurement and Verification of Energy Savings in Energy Performance Contracting*. July 2000.

5) A Consortium ***Media Kit/Briefing Book*** composed of *Close-ups*, *Case-in-Points*, *Consortium Fact Sheet*, press clips, published articles, and general information on Rebuild America is available. This dual-purpose tool allows Consortium members to use it as a media kit for the press, and as a briefing book to prepare speakers for Consortium events and presentations.

5) ***Published articles*** in prominent publications--both local and national--lend a certain third-party credibility, and Consortium members have showcased interesting projects in local media outlets, the Rebuild America *Partner Update* newsletter, and nationally-distributed magazines and journals.

6, 7, 8, 9). For general outreach and educational purposes, the Consortium's ***website, brochure, and newsletter*** are powerful tools and are continually updated. The Consortium also has a ***Power Point presentation*** that can be made into different

versions to reach different audiences. The Consortium brochure is updated as appropriate.

10) Steve Holmes, City & County of Honolulu Partnership has offered to showcase Consortium projects on *Hawaii Municipal TV*—a public access television show that broadcasts hour-long shows on topics of local interest. Plans are to target projects, develop backgrounds and scripts, and suggest other ways to convey the importance and effectiveness of energy efficiency projects to a broadcast audience.

VI. BUILD RESOURCES

To most effectively facilitate the Consortium's goals, the Consortium should identify and leverage statewide resources such as government, private sector, utility rebates, and national RBA and other resources such as State Energy Program awards to achieve greater support for its activities.

On a more State and regional level, the Consortium will involve local chambers of commerce, economic development boards, professional, community and environmental organizations, policy decision-makers, environmental non-profits, energy managers, real estate developers, designers, facilities managers, engineers, ESCO's, vendors, the Hawaii Building Industry Association (BIA), Building Owners and Managers Association (BOMA) chapters, American Institute of Architects (AIA) chapters, small business organizations, labor groups, Chambers of Commerce, and other community and environmental organizations.

Through greater exposure about the Consortium's real-life experiences with projects, energy savings through newer technologies, financing for energy projects, lessons learned about performance contracting, and the tremendous opportunities represented by Consortium projects, those individuals and organizations who become additional resources to the Consortium will know they are dealing with an experienced, knowledgeable, and credible organization.

VII. EMPLOY INNOVATIVE SOLUTIONS

The ultimate goal of the Consortium is to employ innovative solutions to resolve energy/resource efficiency issues. The goal is to implement successful energy efficiency projects by working together with government programs and entities, community political and business leaders, private industry, and energy service companies (ESCO's).

Getting all these players together, in one forum, to share information, ideas, challenges, and solutions, may be the most important innovative solution to implement and promote energy efficiency projects. The unique composition of the Consortium allows this to happen, making it a model of "diversity over adversity."

Performance contracting through private industry ESCO's is an effective way to implement energy efficiency projects. Performance contracting lets future energy savings pay for the entire cost of commercial energy efficiency projects--no up-front funds are necessary. A building owner contracts with an ESCO, which designs, purchases, installs and maintains energy-saving projects. The ESCO then guarantees that the energy savings achieved--which may include replacing lighting equipment, modifying or replacing boilers and chillers, installing modern energy management control systems, replacing motors--will pay for all project costs.

The Consortium holds annual meetings to focus on project and partnership development with the goal of developing a portfolio of projects supported by the Consortium for which funding and partners can be located. The University of Hawaii-Manoa School of Architecture's *Greening the Community Colleges Campus* program, the *Green Office Project*, and the *Hawaii Green Hotel Campaign & Demonstration Project* are excellent examples of innovative solutions to complex energy challenges. From working with progressive education thinkers like Anthony Cortese, to building a mobile display of efficient technologies for the office, to planning an energy-efficient hotel with the local utility and the national Rebuild America program, the University of Hawaii-Manoa School of Architecture and Steve Meder are taking non-traditional approaches to changing the status-quo of energy use in Hawaii.

The Consortium plans to continue working closely with government programs like Rebuild America; community business leaders from lending institutions, chambers of commerce and economic development boards; and professional, political, community and environmental organizations with goals similar to those of the Consortium. Through these channels, the Consortium will be able to more effectively implement energy efficiency measures as well as disseminate information about the benefits of, and mechanisms for, such measures.

VIII. SUMMARY CHART OF ACTION PLAN

Following is a chart summarizing Consortium goals, products and services, and target audiences.

Goal	Support Products and Services	Target Audiences
<i>RAISING AWARENESS</i> Creating community awareness (of energy and resource efficiency)	PSA, RBA and Consortium Websites, Power Point, Consortium Newsletter, Consortium Brochure, press alerts about events, Published Articles in <i>Partner Update</i> newsletter and National Publications	Labor groups, economic professional associations, engineering professional associations, local and national media

<i>BUILDING RESOURCES</i> Identifying and leveraging statewide (and national) resources and building partnerships (Consortium members)	Power Point, RBA and Consortium Websites, Success Stories, Case Studies, Consortium Newsletter, Consortium Brochure, Consortium Fact Sheets; specific projects	Private businesses, government agencies, non-profits, associations, Chambers of Commerce, BIA, BOMA, real estate developers, AIA
<i>EMPLOYING INNOVATIVE SOLUTIONS</i> Employing innovative solutions to implement energy retrofits; resolve energy and resource efficiency issues (implementing energy efficiency projects)	Case-in-Point, Consortium Fact Sheets; project development; workshops; training; TA from national laboratories	ESCO's and financial institutions

IX. EVALUATION

For performance contracting, regular (quarterly and/or annual) energy and dollar savings reports are provided to agencies by the ESCO subsequent to the retrofits. These reports will be used to provide program results to the U.S. DOE on an as needed basis. DBEDT maintains metrics and other information from partnerships. Results are posted on the Rebuild America Information Management System--Rebuild America's private intranet--with access limited to Rebuild America community partnerships and representatives of the Rebuild program and on the DBEDT-ERTD Rebuild Hawaii Consortium website for the community. For other projects implemented under the Rebuild program, the Hawaii Rebuild America Partners are maintaining historical and current energy use data using energy tracking software, where feasible, and provide program results to the U.S. DOE Rebuild America program and Rebuild Hawaii Consortium websites. Articles in Rebuild America and Rebuild Hawaii newsletters will also showcase project successes.

To evaluate media and outreach efforts, quantitative evaluation of Close-ups, Case-in-Points, articles published, website hits achieved, radio ads played, partners signed up, etc. will be tracked and charted. The number of new members and affiliated organizations in the Rebuild Hawaii Consortium will also be tracked.

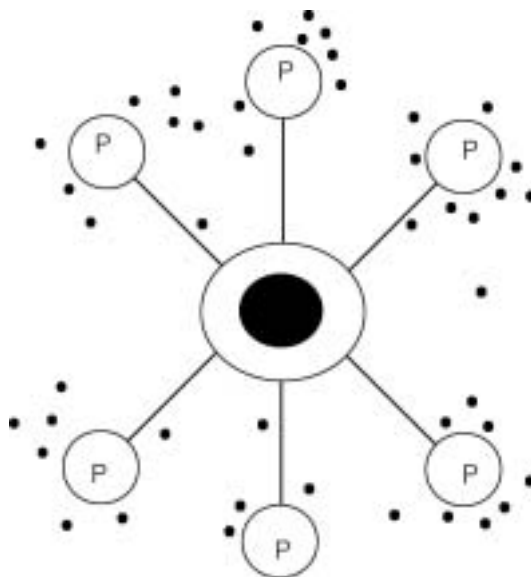
Appendix

- 1. Visual Representation of Rebuild Hawaii Consortium**
- 2. Project Matrix (January 2002)**
- 3. Ongoing and Committee Projects**

Appendix 1

What does a visual representation of the Consortium look like?

Vice President Jim Maskrey illustrated the roles and links between Rebuild America, Rebuild Hawaii Consortium, Rebuild Hawaii Partners and Affiliates.



The **black inner circle** represents:

Rebuild America, DOE, Labs, EPA, FEMP

The **circle around the black circle** represents: *Rebuild Hawaii Consortium*

The **outer circles with the letter P** represent: *Rebuild America Partners within Consortium*

The **black dots** surrounding the outer P circles represent: *Consortium members or “affiliates”, either partnering with Rebuild America Partnerships, or existing independently. Affiliates are not eligible for Rebuild/DOE assistance without partnering, but may still attend meetings for networking and education.*

The P circles and black dots move about dynamically to show partnering.